PHOTOACTIVE COMPONENT COMPRISING ORGANIC LAYERS

ABSTRACT OF THE DISCLOSURE

[0043] The invention relates to a photoactive component, especially a solar cell, comprising organic layers and formed by at least one stacked pi, ni, and/or pin diode. The diodes are characterised in that they comprise at least one p-doped or n-doped transport layer having a larger optical band gap than that of the photoactive layer. The individual diodes are characterised by a high internal quantum yield, but can be optically thin (peak absorption <80%). A high external quantum yield is obtained by either enlarging the optical path of the incident light in the diodes using light traps, or by stacking a plurality of the diodes. The transition between two diodes being facilitated by transition layers for the purposes of improved recombination and generation. Both forms of embodiment have a number of specific advantages using the doped transport layers with a large band gap.